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Introduction

The Israeli-Palestinian conflict has been an ebb and flow of violence and political turmoil for decades. In 1948, the Jewish people proclaimed the land to be the modern-day State of Israel resulting in both inter and intra-state conflict. Many political and ideological issues lie at the center of this conflict with none arguably more important than the issue of water. This scarce resource is critically important to daily life. Much of the land in Israel sits above valuable water sources, or aquifers. This paper covers the water issue in Israel. More specifically, how the public health of the Palestinian people suffers from this critical issue. First covered will be the current agreements and policies that affect the water sources for the Israeli and Palestinian people. Next, will be how the walls have restricted Palestinians from much needed water sources in the Occupied Territories of the West Bank and Gaza Strip. Finally covered will be the dangerous situation of insufficient water supplies and poor sanitation for the Palestinian people.

Current Agreements and Policies Governing Water

The detailed history of this conflict is beyond the scope of this paper however, this section will begin with The Water Law of 1959, which established the legal framework from which Israel's water system is administered. The establishment of this law gave the Israeli government authority to govern all of the water, which they deem public property.¹ It is purely from a nationalist point of view that Israel seeks to maintain control of the water. The initial clause of the 1959 water law states, 'the water resources of the State are public property; they are

subject to control by the state and intended for the needs of the inhabitants and the development of the country.²

The Ministry of Agriculture, the governing body for water, and their initial clause were immediately put to the test when a massive influx of European and East Asian Jews began to migrate to and settle permanently in Israel. As the numbers of Jews increased, so did the demand for water to accommodate personal and agricultural needs to support the people. As people settled in the once sparsely populated desert areas of the south, the requirement for water increased even more. Complicating this matter was the 'land grab' that had taken place by returning Jews. The Gaza Strip and the West Bank, known as the Occupied Territories, were Palestinian refugee areas. The Israelis began encroaching upon the borders and began developing settlements on land previously allotted to Palestinians. This encroachment continues to this very day. A series of agreements were signed in the 1990's following many unsuccessful attempts to reach peace in the region.

The 1993 Oslo Accords were a defining moment in the history of the conflict. Known as the Declaration of Principles, the purpose was to establish an Interim Self-Governing Authority for the Palestinians and define the way forward in the region for the next five years. Article III, *Protocol on Israeli-Palestinian Cooperation in Economic and Development Programs*, directs the two parties to cooperate in the specific area of water management.³

The two sides agree to establish an Israeli-Palestinian continuing Committee for Economic Cooperation, focusing, among other things, on the following:
1. Cooperation in the field of water, including a Water Development Program prepared by experts from both sides, which will also specify the mode of cooperation in the management of water resources in the West Bank and Gaza Strip, and will include proposals for studies and plans on water rights of each party, as well as on the equitable utilization of joint water resources for implementation in and beyond the interim period.

In 1995, a second meeting in Oslo took place and further guidance was developed. The agreement, known as *The Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip*, states that Israel recognizes the Palestinian water rights in the West Bank and that these would be discussed and finalized in the framework of a permanent arrangement.⁴ This document set in writing the amount of water, measured in metric cubic meters, or MCMs, that the Palestinians were going to be allotted under this new plan.

Article 40, of the 1995 Oslo II Accords, set the guidance for a five-year interim period. It directed that a Joint Water Committee (JWC) be developed that would oversee the management of the water sources in the country. The decisions regarding water were to be made by a consensus between the two parties. It also allocated specific quantities to each party although, the amount allocated to Palestinians was about one quarter of that allocated to Israelis in the Occupied Territories of the West Bank. Finally, it documented that Palestinians receive extra water supplies once new wells were dug.⁵ The document was supposed to provide temporary guidance until further negotiations took place. The two parties abide by this document to the present day because new negotiations never were forthcoming.

In 1996, Benjamin Netanyahu transferred the water authority to the Ministry of Infrastructure regarding domestic uses, thus leaving the agricultural uses of water with the Ministry of Agriculture.⁶ This move created more bureaucracy and has politicized this basic human need. Inside the Ministry of Infrastructure lies the Water Commissioner whose responsibility it is to implement the water policy set forth by the Israeli Cabinet and the Ministry of Infrastructure. The price of water however is left to the discretion of the Ministry of Finance with input from the Ministry of Agriculture. Water Commissioners in the past were routinely sought after for their engineering backgrounds and solid knowledge of hydrology. It has since

evolved into a highly political post. The Water Commissioner now has the ability to steer the water policy in the direction of the sitting political party.⁷

Although this was to be a joint venture, the process for Palestinians to get approval for digging new wells from the JWC is lengthy and often times results in denials by the Israelis. The Israelis have the ultimate decision making authority over water issues based on Article 40 of the Oslo II Accords. Water amounts pumped by the Palestinians are monitored with meters installed by Israelis to detect if more than the allotted amount of water is extracted from water sources.⁸ The Palestinian Water Authority power is reduced to providing water and sanitary services to the Palestinians within the constraints of the document and Israeli permission. The JWC authority is mostly one-sided and the Israelis use this to their advantage.

The National Water System and the Walls of the Occupied Territories

The National Water System is comprised of three main sources that supply most of the Israeli water demand and portions of the Palestinian demand in the West Bank and Gaza Strip. The first source is Lake Kinneret, also known as the Sea of Galilee that is the countries only major surface water source. Next is the Coastal Aquifer, which extends eastward along the entire Mediterranean coastline and provides for the Gaza Strip. The Third source is the Mountain Aquifer that is so large it is divided into three sections - Northern, Eastern, and Western and rests below the land border of the West Bank.⁹

The Western Aquifer flows from the Western slopes of the Palestinian hills towards the coast and contains very high quality water. It provides about one fifth of Israel's fresh water and is pumped from numerous wells located just west of the line that separates the Occupied Territories from the West Bank. The Northern Aquifer, although not as large as the Western aquifer, also provides high quality water. The Eastern Aquifer, which drains to the Jordan River

and the Dead Sea lies almost entirely within the confines of the West Bank but contains considerably lower quality brackish water.¹⁰

A source not considered part of the national system but critical to Palestinians, is rainwater. Palestinians living in the West Bank who do not have sufficient water infrastructure collect it to meet their basic needs. About 70 percent of the annual rainfall in Israel occurs from November to March. Distribution throughout the country differs due to vast differences in climate and geography. For instance, the Negev Desert in the south tends to average only 1.18 inches annually while the higher elevations in the north average nearly 35.4 inches. Estimates are that only about one third of the country is cultivatable and that portion receives about 11.1 inches of rainfall annually.¹¹

The most contentious water source is the Mountain Aquifer due to its location below both occupied Israeli and Palestinian territory. The pre-1967 border of the West Bank encapsulates much of the eastern and northern portions of the aquifer. The Jordan River is on the right flank which is the eastern-most border of the West Bank.¹² The pre-1967 border of the West Bank has been under constant encroachment by the Israelis. These villages, known as the Occupied Territories, consist of homes and apartment complexes and are separated from the Palestinian villages by walls. These walls may consist of either large eight meter tall concrete panels, barbed wire fencing, or electrical fencing. They protect the Israelis from the Palestinians and also separate the Palestinians from their fertile land and water sources.

In 2005, an estimated 80 percent of the wall was constructed inside of the West Bank. In order to tend to their fields, some Palestinians have to travel for hours around walls and through checkpoints in order to complete a journey that once took only minutes. At any time, the Israeli Defense Forces or Israeli Police can close the checkpoints if they detect a security threat. During

the second intifada which started in September of 2000, many checkpoints were closed for extended periods preventing Palestinian movement. It is estimated that once the wall is completed, nearly 280,000 Palestinians will be separated from their land.¹³ Palestinian people and their economic development suffer as a result of this conflict. The demand for water continues to increase with population growth. In the West Bank, many of the Palestinians live in villages that do not have running water or sewer systems and must rely on wells to retrieve water for their personal needs.

A Dangerous Situation for the Palestinian People

In the West Bank alone, the Palestinian Water Authority estimated that nearly 227,500 Palestinians were not connected to a running water network in 2007. That is roughly 10 percent of the Palestinian population in the West Bank. To make matters worse, the statistics also show that nearly 34 percent of water brought to the surface is lost due to dilapidated infrastructure or theft.¹⁴ The World Health Organization and the United States Agency for International Development recommend that 100 liters of water per day be the minimum quantity for basic consumption by human beings. Palestinian daily consumption is estimated to be 40 percent less than the recommended daily quantity.¹⁵

Palestinians receive roughly 20 percent of the water brought up from the Mountain Aquifer while the Israelis receive the remaining 80 percent. In addition, it is estimated that the Israelis over extract by more than 50 percent based on the numbers set forth in Article 40 of the 1995 Oslo II Accords.¹⁶ This over extraction has created problems because the aquifer levels are now lower and Palestinian wells do not reach deep enough to get water. The Palestinian Water Authority reported that nearly half of the 774 wells dug in 1967 do not provide water today. To

make matters worse, Israelis sell the excess water they pump to Palestinians instead of allowing them to drill new wells.¹⁷

The sanitation situation in the West Bank is virtually non-existent and presents a terrible problem to the health of Palestinian people. Nearly 69 percent of West Bank Palestinians rely on septic tank systems for their waste disposal. Only four towns have waste treatment facilities with some operating at around 20 percent capacity due to poor maintenance. Of these, none are designed to reuse the water that is treated. Nearly 25 MCMs of human waste is discharged into the environment every year in the West Bank. One town in particular, Ariel-Salfit, had its sole spring water source contaminated by raw sewage.

The spring of Salfit was only 45 feet from the sewage flow that came from the town of Ariel. When the sewage overflowed, the spring soon became contaminated by the wastewater. The Palestinians built a wall to keep the sewage separate from the spring water. Germany funded a new treatment facility yet the Israelis, who wanted it to become a joint project, held up the approval for three years. When the Israelis finally approved the project, it was put on hold again because the area was projected to become a new Israeli settlement.¹⁸

The lack of running water has forced many Palestinians to purchase their household water supplies from tanker trucks at extremely high costs from both a financial and personal health standpoint. Some of the poorest families pay nearly 50 percent of their household income to have water delivered by trucks. In one town for instance, the cost of water brought in by trucks is higher because the truck drivers had to wait at several checkpoints and were restricted by a curfew.¹⁹

A USAID report completed in 2003 found that over half the households in the West Bank towns of Nablus and West Hebron may have been drinking water contaminated with fecal

matter. The bacteriological quality of household water samples was dismal. Forty-one percent of samples derived from piped water sources showed fecal coliform contamination. The water samples taken from tanker trucks were significantly worse whereas 65 percent showed fecal coliform contamination.²⁰ The report further notes the continuing increase in disease among children and adults. Intestinal parasites specifically; amebic dysentery, flagellates, and roundworm, represent a major health problem among Palestinian children. Seventeen percent of children 0-5 years old had diarrhea during the period of observation.²¹ Even more disturbing was the discovery in a small town near Nablus of 450 cases of Hepatitis A of which many were schoolchildren.

The Gaza Strip is no better off. The World Health Organization reported that 26 percent of diseases in Gaza were water related. To compound this situation, Gaza Palestinians are subjected to tons of raw sewage that is not treated and disposed of improperly. Along the coast, 16 sewage outfalls release 70-80,000 MCMs of untreated wastewater into the sea annually. This sewage affects the fish and wildlife and has been discovered in the intakes of desalination plants that creates fresh drinking water for the Palestinians.²² Sweeping changes need to take place in order curb the deadly effects of this situation.

Conclusion

There is a dire situation in the West Bank and Gaza Strip. Many third party non-governmental organizations have recognized that the Palestinians are suffering from lack of clean water and appropriate sanitary measures. The Israelis have made an already difficult settlement situation even worse by using water as a weapon. The Palestinians have a basic right to health and well-being that is being compromised by harsh water policies. International aid organizations should continue to press the Israelis for a more aggressive response to the water

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18-1046 - Major Jeffery Paget

situation of the Palestinian people. National governments, especially the United States of America, should continue to press for a complete freeze on settlements in the Occupied Territories and demand that the health and well-being of Palestinians be at the forefront of further negotiations.



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End Notes:

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- ² Ibid pg 146
- ³ History Central, *The Oslo Accords Full Text*, <http://www.historycentral.com/Israel/Documents/Oslo.html> (accessed 15 February 2010)
- ⁴ State of Israel Water Authority, *The Issue of Water Between the Israelis and Palestinians*, March 2009 pg 3
- ⁵ World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, pg 5
<http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionsReport18Apr2009.pdf>
(accessed 15 February 2010)
- ⁶ Ibid pg 148
- ⁷ Ibid pg 149
- ⁸ Alwyn R. Rouyer, , *Turning Water into Politics The Water Issue in the Palestinian-Israeli Conflict*, New York, N.Y., St Martin's Press, Inc. 2000, pg 50
- ⁹ Martin Sherman, *The Politics of Water in the Middle East An Israeli Perspective on the Hydro-Political Aspects of the Conflict*, New York, N.Y., St Martin's Press, Inc. 1999 pg 7
- ¹⁰ World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, pg 27
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- ¹¹ US Library of Congress, <http://countrystudies.us/israel/36.htm> (accessed 20 February 2010)
- ¹² Ibid, pg 8
- ¹³ Mark Zietoun, *Power and Water in the Middle East The Hidden Politics of the Palestinian-Israeli Conflict*, New York, N.Y, I.B. Tauris & Co. Ltd. 2008 pg 94-95
- ¹⁴ B'T selem, *The gap in water consumption between Palestinians and Israelis*, The Israeli Information Center for Human Rights in the Occupied Territories, <http://www.btselem.org/english/Water/Statistics.asp#Consumption>
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- ¹⁶ World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, pg 29
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- ¹⁷ World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, pg 34
<http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionsReport18Apr2009.pdf>
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- ¹⁸ Ibid pg 20
- ¹⁹ Ibid pg 22
- ²⁰ Ali Sha'ar, Patrick Kelly, Eckhard Kleinau, USAID Report, *USAID Village Water and Sanitation Program West Bank of Palestine Environmental Health Assessment – Phase II* http://pdf.usaid.gov/pdf_docs/PNACT359.pdf June 2003 pgs 43-50 (accessed 21 February 2010)
- ²¹ Ibid pgs 35-40
- ²² World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, pg 31
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